

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P828349

Luminaire Tested: **OHBL-24SE-MCL-UNV-L940-CD-UPL24**

Issue Date: 5/3/2024



Test Information

Test Method: LM-79-08
Report Number: P828349
REPORT IS A COMBINATION OF REPORTS P826246 AND G3-2310-221-6
Test Lab: INNOVATION CENTER
Issue Date: 5/3/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: OHBL-24SE-MCL-UNV-L940-CD-UPL24
Description:
Light Source: -
Ballast/Driver: -

Summary

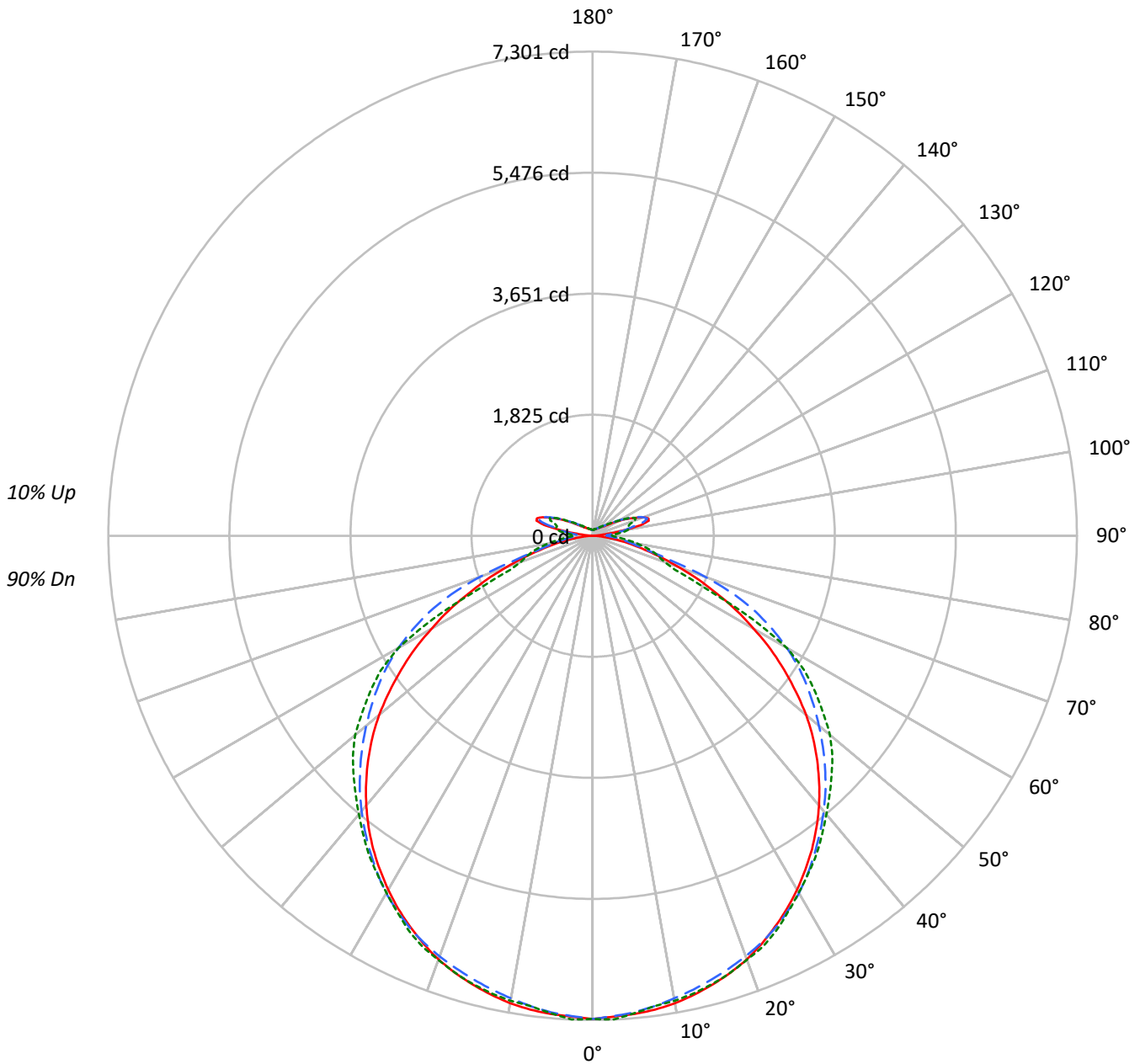
Lumens per Lamp: N/A
Luminaire Lumens: 22698.0 lumens
Efficiency: N/A
Efficacy: 146.1 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.27 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 3.78' x L: 1.67' x H: 0.17')
CIE Type: Semi-Direct

Input Watts (W): 155.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

TEST NUMBER: P828349

CATALOG NUMBER: OHBL-24SE-MCL-UNV-L940-CD-UPL24

Luminous Intensity Polar Plot





TEST NUMBER: P828349

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|
| RF | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 20 | | | | |
| RC | 80 | | | | 70 | | | | 50 | | | | 30 | | | | 10 | | | 0 | |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | | |
| 0 | 117 | 117 | 117 | 117 | 113 | 113 | 113 | 113 | 105 | 105 | 105 | 99 | 99 | 99 | 93 | 93 | 93 | 93 | 93 | 93 | 90 |
| 1 | 107 | 102 | 98 | 94 | 103 | 99 | 95 | 92 | 93 | 90 | 87 | 87 | 85 | 83 | 82 | 80 | 78 | 78 | 78 | 78 | 76 |
| 2 | 97 | 89 | 83 | 77 | 94 | 87 | 81 | 76 | 81 | 77 | 72 | 77 | 73 | 69 | 72 | 69 | 66 | 66 | 66 | 66 | 63 |
| 3 | 89 | 79 | 71 | 64 | 85 | 76 | 69 | 63 | 72 | 66 | 61 | 68 | 63 | 58 | 64 | 60 | 56 | 56 | 56 | 56 | 54 |
| 4 | 81 | 70 | 61 | 55 | 78 | 68 | 60 | 54 | 64 | 57 | 52 | 60 | 55 | 50 | 57 | 52 | 48 | 48 | 48 | 48 | 46 |
| 5 | 75 | 62 | 53 | 47 | 72 | 60 | 52 | 46 | 57 | 50 | 45 | 54 | 48 | 43 | 51 | 46 | 42 | 42 | 42 | 42 | 40 |
| 6 | 69 | 56 | 47 | 41 | 66 | 54 | 46 | 40 | 52 | 44 | 39 | 49 | 43 | 38 | 46 | 41 | 37 | 37 | 37 | 37 | 35 |
| 7 | 64 | 51 | 42 | 36 | 62 | 49 | 41 | 36 | 47 | 40 | 35 | 45 | 38 | 34 | 42 | 37 | 33 | 33 | 33 | 33 | 31 |
| 8 | 59 | 46 | 38 | 32 | 57 | 45 | 37 | 32 | 43 | 36 | 31 | 41 | 35 | 30 | 39 | 33 | 29 | 29 | 29 | 29 | 27 |
| 9 | 55 | 42 | 34 | 29 | 53 | 41 | 34 | 28 | 39 | 33 | 28 | 38 | 31 | 27 | 36 | 30 | 26 | 26 | 26 | 26 | 24 |
| 10 | 52 | 39 | 31 | 26 | 50 | 38 | 31 | 26 | 36 | 30 | 25 | 35 | 29 | 25 | 33 | 28 | 24 | 24 | 24 | 24 | 22 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 12444 | 12444 | 12444 |
| 5° | 12303 | 12258 | 12341 |
| 10° | 12198 | 12067 | 12256 |
| 15° | 12061 | 11923 | 12227 |
| 20° | 11923 | 11830 | 12173 |
| 25° | 11715 | 11736 | 12122 |
| 30° | 11493 | 11591 | 11952 |
| 35° | 11237 | 11365 | 11890 |
| 40° | 10922 | 11131 | 11788 |
| 45° | 10509 | 10861 | 11792 |
| 50° | 9975 | 10554 | 11793 |
| 55° | 9177 | 10251 | 11463 |
| 60° | 8162 | 9810 | 10726 |
| 65° | 6878 | 9001 | 6905 |
| 70° | 5406 | 7012 | 5115 |
| 75° | 3908 | 4150 | 5361 |
| 80° | 2559 | 3435 | 5405 |
| 85° | 1282 | 3119 | 5683 |



TEST NUMBER: P828349

CATALOG NUMBER: OHBL-24SE-MCL-UNV-L940-CD-UPL24

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 687.0 | 3.0 |
| 10°-20° | 1970.0 | 8.7 |
| 20°-30° | 3008.8 | 13.3 |
| 30°-40° | 3650.7 | 16.1 |
| 40°-50° | 3826.3 | 16.9 |
| 50°-60° | 3467.2 | 15.3 |
| 60°-70° | 2324.6 | 10.2 |
| 70°-80° | 1043.9 | 4.6 |
| 80°-90° | 384.2 | 1.7 |
| 90°-100° | 315.6 | 1.4 |
| 100°-110° | 753.6 | 3.3 |
| 110°-120° | 627.3 | 2.8 |
| 120°-130° | 302.9 | 1.3 |
| 130°-140° | 154.3 | 0.7 |
| 140°-150° | 90.4 | 0.4 |
| 150°-160° | 53.8 | 0.2 |
| 160°-170° | 28.5 | 0.1 |
| 170°-180° | 8.7 | 0.0 |
| 0°-30° | 5665.9 | 25.0 |
| 0°-40° | 9316.6 | 41.0 |
| 0°-60° | 16610.2 | 73.2 |
| 0°-90° | 20362.8 | 89.7 |
| 90°-120° | 1696.5 | 7.5 |
| 90°-150° | 2244.1 | 9.9 |
| 90°-180° | 2335.0 | 10.3 |
| 0°-180° | 22698.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 7286 | 7286 | 7286 | 7286 | 7286 | |
| 5° | 7239 | 7264 | 7213 | 7236 | 7226 | 688 |
| 15° | 7004 | 6976 | 6927 | 6988 | 6996 | 1977 |
| 25° | 6506 | 6478 | 6523 | 6583 | 6564 | 2999 |
| 35° | 5767 | 5781 | 5840 | 5902 | 5879 | 3604 |
| 45° | 4786 | 4864 | 4955 | 5081 | 5097 | 3687 |
| 55° | 3522 | 3692 | 3943 | 4101 | 4092 | 3144 |
| 65° | 2067 | 2390 | 2714 | 2290 | 1870 | 2059 |
| 75° | 813 | 1180 | 868 | 888 | 946 | 889 |
| 85° | 140 | 269 | 344 | 416 | 436 | 171 |
| 90° | 5 | 119 | 219 | 277 | 294 | 12 |
| 95° | 47 | 152 | 272 | 347 | 377 | 145 |
| 105° | 876 | 887 | 794 | 595 | 556 | 832 |
| 115° | 610 | 620 | 638 | 645 | 642 | 615 |
| 125° | 301 | 318 | 335 | 337 | 335 | 283 |
| 135° | 183 | 188 | 195 | 202 | 205 | 145 |
| 145° | 136 | 140 | 143 | 145 | 146 | 86 |
| 155° | 111 | 114 | 116 | 117 | 116 | 52 |
| 165° | 98 | 99 | 100 | 100 | 100 | 28 |
| 175° | 90 | 91 | 90 | 90 | 90 | 9 |
| 180° | 89 | 89 | 89 | 89 | 89 | |



TEST NUMBER: P828349

CATALOG NUMBER: OHBL-24SE-MCL-UNV-L940-CD-UPL24

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 7286.0 | 7286.0 | 7286.0 | 7286.0 | 7286.0 |
| 2.5° | 7256.6 | 7287.1 | 7249.2 | 7290.3 | 7300.8 |
| 5° | 7238.6 | 7263.9 | 7213.3 | 7235.5 | 7226.0 |
| 7.5° | 7206.0 | 7214.4 | 7154.4 | 7172.3 | 7153.4 |
| 10° | 7157.5 | 7153.4 | 7082.8 | 7117.5 | 7121.7 |
| 12.5° | 7085.9 | 7073.3 | 7010.1 | 7062.7 | 7063.8 |
| 15° | 7003.7 | 6976.3 | 6926.8 | 6987.9 | 6996.3 |
| 17.5° | 6908.9 | 6873.0 | 6840.4 | 6919.5 | 6906.8 |
| 20° | 6798.3 | 6756.1 | 6749.8 | 6836.2 | 6804.6 |
| 22.5° | 6661.3 | 6628.6 | 6643.4 | 6725.6 | 6705.6 |
| 25° | 6506.5 | 6478.1 | 6523.4 | 6583.3 | 6564.4 |
| 27.5° | 6343.2 | 6326.3 | 6377.9 | 6424.3 | 6387.4 |
| 30° | 6164.1 | 6154.6 | 6223.0 | 6261.0 | 6214.6 |
| 32.5° | 5969.2 | 5972.3 | 6037.7 | 6089.2 | 6046.1 |
| 35° | 5766.9 | 5780.6 | 5839.6 | 5901.8 | 5878.6 |
| 37.5° | 5544.6 | 5575.1 | 5634.2 | 5704.8 | 5680.5 |
| 40° | 5309.7 | 5354.0 | 5419.2 | 5504.5 | 5482.5 |
| 42.5° | 5055.8 | 5111.6 | 5195.9 | 5290.7 | 5288.6 |
| 45° | 4786.1 | 4864.0 | 4954.6 | 5081.0 | 5096.9 |
| 47.5° | 4505.8 | 4593.3 | 4708.1 | 4876.7 | 4900.9 |
| 50° | 4201.4 | 4311.0 | 4454.3 | 4656.5 | 4671.3 |
| 52.5° | 3862.2 | 4011.8 | 4201.4 | 4395.2 | 4377.3 |
| 55° | 3521.9 | 3691.5 | 3943.3 | 4101.3 | 4091.8 |
| 57.5° | 3182.6 | 3373.4 | 3678.9 | 3791.6 | 3790.5 |
| 60° | 2803.3 | 3044.6 | 3378.6 | 3464.0 | 3379.6 |
| 62.5° | 2452.5 | 2711.7 | 3058.4 | 2996.2 | 2707.5 |
| 65° | 2067.0 | 2390.5 | 2713.8 | 2290.3 | 1870.0 |
| 67.5° | 1724.6 | 2061.7 | 2305.1 | 1568.7 | 1343.2 |
| 70° | 1380.1 | 1752.0 | 1797.3 | 1164.1 | 1148.4 |
| 72.5° | 1074.5 | 1470.7 | 1240.0 | 996.6 | 1047.2 |
| 75° | 813.3 | 1179.9 | 868.1 | 888.1 | 946.0 |
| 77.5° | 593.1 | 906.0 | 675.3 | 778.5 | 826.0 |
| 80° | 407.7 | 641.6 | 551.0 | 654.3 | 686.9 |
| 82.5° | 256.0 | 423.5 | 441.4 | 526.8 | 560.4 |
| 85° | 140.2 | 268.7 | 344.5 | 416.1 | 436.1 |
| 87.5° | 57.9 | 162.2 | 263.4 | 321.3 | 338.2 |
| 90° | 5.4 | 119.1 | 218.9 | 277.3 | 293.9 |
| 92.5° | 15.8 | 107.6 | 208.0 | 268.8 | 287.5 |
| 95° | 47.1 | 152.3 | 271.8 | 346.7 | 377.1 |
| 97.5° | 236.0 | 297.3 | 374.3 | 452.8 | 485.7 |
| 100° | 483.1 | 546.4 | 496.5 | 537.9 | 549.0 |
| 102.5° | 745.8 | 766.8 | 609.0 | 568.1 | 564.3 |
| 105° | 876.2 | 886.7 | 793.9 | 595.2 | 555.7 |



TEST NUMBER: P828349

CATALOG NUMBER: OHBL-24SE-MCL-UNV-L940-CD-UPL24

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 709.9 | 727.7 | 734.9 | 724.3 | 698.6 |
| 115° | 610.1 | 620.3 | 638.3 | 645.0 | 641.9 |
| 117.5° | 523.1 | 526.1 | 545.4 | 550.9 | 553.8 |
| 120° | 434.5 | 445.1 | 466.6 | 467.5 | 463.3 |
| 122.5° | 365.8 | 376.2 | 393.0 | 396.6 | 392.4 |
| 125° | 301.3 | 318.0 | 334.6 | 336.8 | 335.3 |
| 127.5° | 257.1 | 268.4 | 285.5 | 289.5 | 289.7 |
| 130° | 224.9 | 232.9 | 246.9 | 252.0 | 252.8 |
| 132.5° | 201.6 | 208.8 | 218.1 | 225.7 | 224.8 |
| 135° | 183.4 | 187.9 | 195.0 | 202.1 | 204.8 |
| 137.5° | 169.6 | 172.2 | 177.5 | 185.4 | 186.4 |
| 140° | 156.6 | 160.1 | 163.4 | 169.4 | 171.3 |
| 142.5° | 144.2 | 148.8 | 151.2 | 156.1 | 157.2 |
| 145° | 135.5 | 140.1 | 142.7 | 144.6 | 146.5 |
| 147.5° | 128.8 | 132.2 | 134.0 | 135.7 | 136.8 |
| 150° | 122.7 | 124.4 | 127.0 | 127.9 | 128.8 |
| 152.5° | 116.6 | 118.3 | 120.9 | 121.8 | 121.8 |
| 155° | 111.4 | 114.2 | 115.9 | 116.8 | 115.7 |
| 157.5° | 107.0 | 109.8 | 111.5 | 112.4 | 112.4 |
| 160° | 103.6 | 105.5 | 107.2 | 108.1 | 108.1 |
| 162.5° | 101.1 | 102.0 | 102.9 | 103.7 | 103.7 |
| 165° | 98.5 | 99.4 | 100.2 | 100.2 | 100.2 |
| 167.5° | 95.9 | 96.9 | 96.8 | 97.6 | 97.6 |
| 170° | 93.3 | 94.2 | 94.2 | 94.0 | 94.0 |
| 172.5° | 91.6 | 92.4 | 92.4 | 91.4 | 92.2 |
| 175° | 89.8 | 90.7 | 89.6 | 89.5 | 89.5 |
| 177.5° | 90.9 | 89.8 | 88.8 | 87.7 | 86.7 |
| 180° | 88.8 | 88.8 | 88.8 | 88.8 | 88.8 |



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - - 90°-270°







| | | | | | |
|--------|-------|-------|-------|-------|-------|
| 107.5° | 880.8 | 899.0 | 862.8 | 696.0 | 592.0 |
| 110° | 814.1 | 832.4 | 819.6 | 762.2 | 679.0 |



(END OF REPORT)